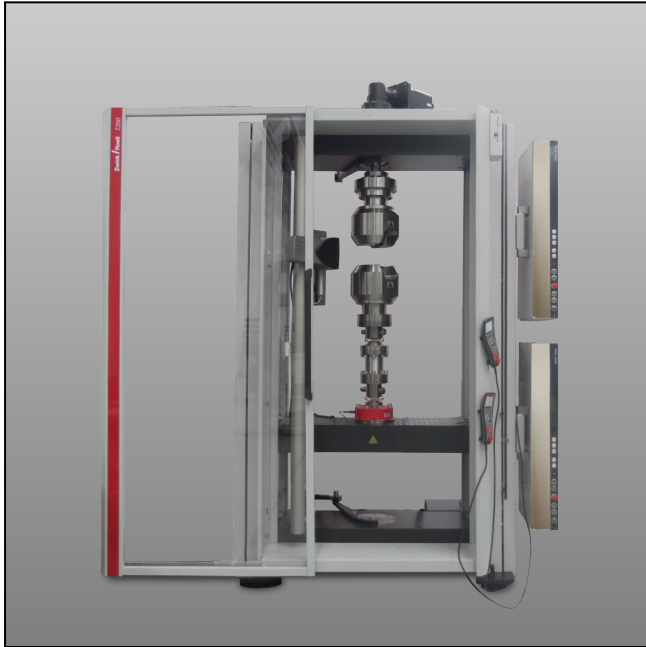


## Product Information

### Torsion drives for floor-standing testing machines

CTA: 124077 242858



Floor-standing testing machine with torsion drive and installed specimen grips



Floor-standing testing machine with torsion drive

#### Applications

Torsion drives can be installed in table-top testing machines to carry out uniaxial and multi-axis load tests (tensile or compression combined with torsion) as part of materials and components testing.

In case of hazardous specimens, an optional CE-compliant safety device can be used.

#### The system consists of

- Floor-standing testing machine in a force range of 100 kN to 250 kN from our standard product portfolio. Available in different load frame heights and widths
- Torsion drive on top crosshead
- Precise load cells and torque transducers
- testControl II measurement and control electronics

#### Advantages and features

- Because of their modular design, torsion drives can be retrofitted to existing table-top or floor-standing testing machines at any time
- Operation with standard PC (no additional interface card required) and testXpert III testing software
- High-resolution rotation angle and travel measurement
- Easy handling and user-friendly operation for maximum flexibility
- Synchronization of the two test axes
- The modular design allows for the use of a number of components from the ZwickRoell standard products portfolio, including specimen grips, test tools, temperature chambers and more

## Product Information

### Torsion drives for floor-standing testing machines

#### Torsion drives with flange connection

Item No.	1024998	1025005	
Nominal torque $M_{nom}$	200	2000	Nm
Permissible axial force	250	250	kN
<b>Drive</b>			
Rotational speeds	0.001 ... 10	0.002 ... 10	rpm
Pitch circle connection flange $\emptyset$	115/220 <sup>1)</sup>	115/220 <sup>1)</sup>	mm
Electrical power specifications	230 V AC, 50/60 Hz, 1Ph/PE/N	400 V AC, 50/60 Hz, 3Ph/PE/N	V
Power consumption	2.2	5	kVA

1) The scope of delivery includes additional adapter flanges with locking pin connection

#### Load cell with two-sided flange connection

For a combination of force and torque transducer it is important to make sure that the load cell permits the occurring torque.

Nominal force $F_{nom}$ [kN]	Permissible torque [Nm]	Load cell type	Pitch circle connection flange $\emptyset$ [mm]	Accuracy Class 1 [N]	Item No.
10	250	Xforce K	115	$\geq 20.0$	3006020
20	250	Xforce K	115	$\geq 40.0$	3010037
30	250	Xforce K	115	$\geq 60.0$	3010155
50	900	Xforce K	115	$\geq 100.0$	3009454
100	27500	Xforce K	220	$\geq 400.0$	068922 <sup>1)2)</sup>
250	27500	Xforce K	220	$\geq 500.0$	068918 <sup>3)2)</sup>

1) Flange interface with 70 mm centering gauge instead of mounting stud, for combination with the alignment fixture (Item No. 068902) and hydraulic grip type 8594 "body-over-wedge" (Item No. 072865 and 072869). Design and technical data as for Item No. 068918.

2) The load cell cannot be used in combination with table-top testing machines.

3) Flange interface with centering gauge instead of mounting stud (pitch circle 115/220 mm, centering gauge D30/70 mm).

#### Torque transducer with two-sided flange connection

For a combination of force and torque transducer it is important to make sure that the torque transducer permits the occurring axial force.

Nominal torque $M_{nom}$ [Nm]	Permissible axial force [kN]	Torque transducer type	Pitch circle connection flange $\emptyset$ [mm]	Accuracy Class 1 [Nm]	Item No.
100	50	Type M	75/115	$\geq 1$	3010057
200	50	Type M	75/115	$\geq 2$	3010040
500	100	Type M	220/115	$\geq 5$	3010038
1000	250	Type M	220/115	$\geq 10$	3010039
2000	250	Type M	220/115	$\geq 20$	3010042

## Product Information

### Torsion drives for floor-standing testing machines

#### Accessories

##### Top crossheads

To mount the torsion drive on the top crosshead, a special top crosshead with corresponding through bore-hole to accommodate the torsion drive is required. If the torsion drive is mounted on the top crosshead, the testing machine can be operated with two test areas, one on top of the other. Tensile/compression torsion tests can be performed in the upper test area above the moving crosshead. In the lower test area, below the moving crosshead, tensile/compression tests can be performed. This reduces the need for extra setup efforts in case of frequently changing tests.

	Torsion drive 200 Nm	Torsion drive 2000 Nm
Floor-standing testing machine 100 kN (2 guide columns) Test area width 640 mm	1033163	-
Floor-standing testing machine 100 kN (4 guide columns) Test area width 1040 mm	1033164	-
Floor-standing testing machine 100 - 250 kN (4 guide columns) Test area width 640 mm	1033165	1033167
Floor-standing testing machine 150 - 250 kN (4 guide columns) Test area width 1040 mm	1033166	1033168

#### Required accessories

Description	ArticleNumber
<b>Emergency stop link<sup>1)</sup></b> Connection box for emergency stop link from several testControl II (slave) systems to one system.	<b>1023870</b>

1) 2x required

#### Optional accessories

Description	ArticleNumber
<b>Ethernet switch for 10/100/1000 Mbit</b> Ethernet hub for connection of both electronics units. This way only one Ethernet connection is needed on the PC.	<b>1026425</b>
<b>Safety door link<sup>1)</sup></b> Extension of tCII emergency stop link to include safety door functionality.	<b>1041273</b>
<b>Display-equipped remote control</b> For the testing machine	<b>057984</b>
<b>Display-equipped remote control</b> For the torsion drive	<b>1025350</b>

1) Mandatory requirement when using a safety door (2x)